# Purbeck Local Plan

## Submission January 2019

## Transport Background Paper

Purbeck District Council

Thriving communities in balance with the natural environment

# Contents



## Appendix 1 Highways England Statement

## National Policy and Guidance

1. Planning should actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable. In transport terms sustainability is about minimising the distance travelled to access services, education and employment and making the fullest possible use of public transport, walking and cycling.

2. The National Planning Policy Framework NPPF sets out the importance of transport policies in facilitating sustainable development and identifies that the use of smarter technologies can reduce the need to travel. It states that the transport system needs to be balanced in favour of sustainable transport but recognises that sustainable solutions will vary from urban to rural areas. In preparing local plans, local planning authorities should therefore support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport.

3. Paragraph 102 of the National Planning Policy Framework states that transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

    a) the potential impacts of development on transport networks can be addressed;

    b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;

    c) opportunities to promote walking, cycling and public transport use are identified and pursued;

    d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for mitigation and for net gains in environmental quality; and

    e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.

4. Paragraph 123 identifies that as part of optimising land use in the area, policies should include minimum densities standards for town centres and other locations that are well served by public transport, significantly above the existing density in the areas.

5. Development should only be prevented or refused on transport grounds where there would be an unacceptable impact on highway safety, or the residual cumulative impacts after mitigation of development would be severe.

6. Planning policy guidance emphasises that the transport evidence base should identify the opportunities for encouraging a shift to more sustainable transport usage, where reasonable to do so; and highlight the infrastructure requirements for inclusion in infrastructure spending plans linked to developer contributions and other funding sources.

## Transport Strategies for Purbeck

7. In 2004 The Purbeck Transportation Study was undertaken by Burro Happold in response to the steady decline of transportation conditions in Purbeck, and the need to take action to arrest this decline. The resulting strategy identified a range of possible solutions from road-building schemes including bypasses, improvements to the rail service, in particular between Dorchester and Poole and reconnecting Swanage railway to the main network, the provision of cycling and walking facilities and related-infrastructure, traffic management through speed limits, traffic calming and user charging, and enhanced bus services. The strategy in turn informed the Local Transport Plan and its revisions and the Purbeck Transport Strategy (PTS) projects list.

8. DCC's Local Transport Plan 3 sets out the long term goals, strategy and policies for improving transport in the area over the fifteen year period from 2011 to 2026. The LTP3 covers all modes of transport (including walking, cycling, public transport, car based travel and freight), the management and maintenance of the highway network, and the relationships between transport and wider policy issues such as the economy, environment, safety and health, and social inclusion.

9. Circumstances have changed significantly since the strategy was published and the road building elements of the PTS removed due to lack of funding, deliverability issues and the national emphasis on more sustainable forms of transport such as public transport, walking and cycling.

## Purbeck Transport Studies

10. As part of the development of the Pre-submission Draft Purbeck Local Plan, the Council has commissioned a number of transport studies to get an up-to-date picture. The studies used the housing figures and development strategies from the 2016 options consultation. Since the options consultation, the housing numbers have been reviewed and reduced significantly. Consequently the impact of the development proposed in the Pre-submission Draft Purbeck Local Plan will be reduced. Some site promoters have carried out specific site studies also.

### Purbeck Modelling Spatial Model Report – April 2016

11. Following on from the issues and options consultation Purbeck District Council commissioned a high level assessment of traffic impacts of potential development proposals.

12. Dorset County Council's modelling team undertook a high level of assessment of the impact of two proposed development options in the Purbeck District. The study area included all the parishes in Purbeck District and some external zones that represent immediate surrounding areas such as Poole and Weymouth plus the A35 and A352 that allow people to get in and out of the Purbeck District via major link roads.

13. Two extreme scenarios for future housing development were tested, Option A focussing development in the south-west and Option B focussing development in the north east (Appendix 1 – Development Strategy options). The Council's Preferred Option at the time of consultation was considered to be the "middle ground" between the two scenarios

tested and has therefore not been modelled at this stage. The modelling undertaken to date demonstrates that the two scenarios tested will not have a severe impact on the highway network. As the preferred option at the time sat in the middle of these two scenarios, the Council concluded that the preferred option was therefore acceptable on severe impact grounds. As mentioned above, the number of homes to be delivered overall has since reduced significantly from 238 per year to 168 per year.

14. The Council is aware that impacts on local infrastructure need to be mitigated. Where there is a negative impact on the network, the developer will be required to initiate mitigation measures such as improving walking, cycling and public transport links to and from the development site in order for it to be acceptable in sustainable development terms.

## Moreton/Crossways/Woodsford – Traffic Impact Assessments - 2016

15. In 2016 West Dorset District Council commissioned a Traffic Impact Assessment of proposed built housing/mixed-use development and minerals development in the Moreton / Crossways / Woodsford area from Dorset County Council's Transportation Modelling Team. Part of that study used a morning (AM) peak model to look at 5 different scenarios for future housing development in the area. Scenarios 2 to 5 included housing development at Moreton, ranging from 500 houses in scenario 2, 650 houses in scenario 3 to 900 houses in scenarios 4 and 5, alongside increasing levels of housing development at Crossways up to approximately 2,800 in total.

16. All AM peak forecast models performed well and generally showed no signs of excessive queuing or deterioration of vehicle speeds (increasing congestion) in any scenario, the exception being the A35/A352 junction near Max Gate Roundabout predicted to reach 94% capacity in Scenario 5. There would be additional queuing at Crossways and Moreton rail crossings, which would be reduced during the inter-peak period.

17. In the worst case scenario 5, significant increases in traffic were noted on the B3390 south of Crossways, the D21322 west of Crossways, and the C33 West Stafford Bypass. However, the highest predicted future flows on these roads are around 600 passenger car units (PCUs) per hour which should be comfortably accommodated in terms of capacity. The report states that whilst the modelling shows that even the highest increases can be accommodated, due to the impact on some junctions it may be prudent to investigate some scenarios further.

18. Inter-peak forecast models show no signs of excessive queuing or deterioration of vehicle speeds. In the worst case scenario significant increases in traffic are noted on the B3390 south of Crossways and C33 West Stafford Bypass. However, the highest predicted future flows on these roads are around 550 PCUs per hour which should be comfortably accommodated in terms of capacity. The proposed developments in the worst case scenario SC5 has some effect on the key junctions however, the modelled volume over capacity figures show each junction can cope with the predicted inter-peak traffic.

19. It is worth noting that in Moreton we are now proposing 490 homes – the lower end of the range tested.

## Strategic Road Network Transport Modelling - 2017

20. As part of the response to the Local Plan Review Options consultation in 2016 Highways England raised concerns over the cumulative impacts of development across the District on the strategic road network (SRN) – A31 and A35. The Council has subsequently worked with Highways England to commission transport studies to look at the impact of development, including that proposed in the Bere Regis Neighbourhood Plan, on the SRN. The studies use the 2016 objectively assessed need figure of 238 homes per year, which has been reduced recently to 168 homes per year.

21. The strategic road network transport modelling phase 1 predicts the additional trips entering the SRN from development created by two alternative 'opposing' options from Purbeck Local Plan 2016 consultation – one focussing development in the south-west and the other focussing development in the north-east. The study area included:

    - Bere Regis Roundabout (A31/A35);
    - Max Gate (A35/A352, Dorchester);
    - Stinsford Roundabout (A35/Stinsford Hill/Hollow Hill, Dorchester);
    - Roundhouse Roundabout (A31/A350); and
    - Lake Gates (A31/B3078, Wimborne).

22. The study showed significant additional traffic entering the SRN at all junctions except Stinsford roundabout. Consequently phase 2 of the project modelled the impact on all the junctions, except Stinsford roundabout, in detail. The work was divided between Highways England's consultants CH2M and the Council's consultants Systra.

23. The results of the Phase 2 modelling indicates that the roundabouts on the SRN are currently operating at or over capacity, albeit not always with high levels of associated queuing and delay. Towards the end of the plan period (2033) junction operation deteriorates and the addition of traffic associated with the local plan makes conditions worse. However, overall, the level of detriment on the strategic road network caused by the addition of local plan traffic is considered in general by Highways England not likely to be severe, especially as the overall level of growth has been reduced since the studies were commissioned.

24. Highways England are content that the work undertaken demonstrates that the addition of traffic related to the growth proposed in the local plan is unlikely to result in a severe impact on the SRN and therefore that mitigation to support it is unlikely to be required (Appendix 1).

## Site specific transport studies

*The Potential Traffic Impacts of Development in the Wool Area – Trip and Queue Analysis (February 2016)*

25. In early 2016 DCC published a report on the potential traffic impacts of development in the Wool area. The study considered the impact of 4 scenarios on the traffic queues on

the main roads in to and out of Wool. These are inevitably impacted on by the railway crossing barrier down times. The scenarios are:

- Scenario 1 assumes all traffic from 1000 new dwellings will use the A352 Dorchester Road.
- Scenario 2 assumes, from 1000 new dwellings, 75% will use Dorchester Road whilst 25% will use the B3071 Lulworth Road before joining the queue.
- Scenario 3 assesses the impact of 1938 two-way trips - the outstanding capacity of two-way trips per day in and out of Dorset Green Technology Park (recently renamed Dorset Innovation Park). The innovation park currently has a traffic credit of 3,900 two-way trips a day, representing the trips if it were fully occupied. Surveys in 2015 showed 1962 actual two-way trips, leaving an outstanding capacity of 1938.
- Scenario 4 combines Scenarios 1 and 3.
- Scenario 5 adds the predicted trips associated for an additional 200 proposed dwellings to the results from Scenario 4.

26. The study used a range of data sources including automatic traffic counters (ATCs), annual average daily traffic (AADT) counts, TRICS, ONS and NOMIS travel to work data, and based the queue length calculations on the general assumption that a car takes up 6m of road space when in a queue.

27. This study shows that all the scenarios tested will potentially increase queue lengths at the level crossing. However, the overall impact on the highway network is unlikely to be severe. Whilst the County Council has no objections in principle to the potential 1000 dwellings at Wool, plus growth of employment land at the Dorset Innovation Park Enterprise Zone, the District Council is aware that impacts on the local infrastructure need to be mitigated. Where there is a negative impact on the network, such as increased queue lengths at the level crossing, the developer will be required to initiate mitigation measures such as improving walking, cycling and public transport links to and from the site, as well as providing affordable options to improve the level crossing, in order for the development to be acceptable in transport terms.

28. One conceptual option is to move Wool Station to the west, closer to the proposed new housing development and Dorset Innovation Park Enterprise Zone. This idea is not supported by the Parish Council or Dorset Local Enterprise Partnership and initial feedback from Network Rail is that it is not thought that this would reduce barrier downtime at the level crossing but DCC are still awaiting a detailed explanation. There are also deliverability issues in terms of the rail infrastructure. Another option is to extend the existing platform at Wool Station. It is not known if this would reduce barrier down-time significantly and this requires further investigation with Network Rail.

29. A key change since the modelling was carried out is the reduction in the number of new homes proposed in the Purbeck Local Plan at Wool from 1,000 to 470. It is therefore assumed safe to predict that the level of additional queuing predicted would be halved.

## Transport studies accompanying site proposals

30. A number of transport studies have been commissioned by promoters for larger sites consulted on as part of the 2016 Local Plan Review Options and these remain relevant for sites under consideration as part of the additional consultation. In some instances, where DCC have not agreed with assumptions made, supplementary work has been requested. The studies/assessments available are:

    - Moreton Transport Statement - Peter Brett 2016
    - North & West Wareham Transport Assessment – Stuart Michael Associates Ltd, Sept 2015
    - Wool Transport Strategy & Assessment - Part 1 – iTransport, March 2015
    - Wool Transport Strategy & Assessment - Part 2 – Appendices – iTransport,
    - Wool Transport Strategy & Assessment - Part 3 – Queue Length Analysis – iTransport, Aug 2015

31. As well as modelling the additional traffic created by development, the studies identify potential projects to mitigate the impact. Again these studies were based on higher levels of development.

# Severe Impact

32. The NPPF states that development should only be prevented or refused on transport grounds if cumulative impacts are severe. DCC has researched what “severe impact” might mean using planning appeal decisions to see what government planning inspectors say on the issue. Notably, one planning inspector (Harrow Estates Plc & Bridgemere Land Plc vs Chester West) has ruled that inconvenience to drivers as a result of delay is not a planning policy concern. In another case (APP/P1750/W/15/3005021) the inspector found that even a doubling in queue length was not a reason to refuse the development. The transport modelling studies commissioned by the Council show that the proposed development is very unlikely to approach a doubling of queues in Purbeck.

33. From DCC research no local planning authority has to date successfully challenged and prevented development on the basis of it having a severe impact on the transport network.

The studies undertaken have led to the conclusion that, whilst development will have an impact on the network, it will not be severe enough to mean that proposals should be refused on transport grounds alone. Development will still need to mitigate its impact on the network by providing the necessary junction improvements, traffic management, safety measures and sustainable transport schemes.

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**PURBECK LOCAL PLAN REVIEW**

Dear Sue,

I am writing in respect of the Local Plan Review on which you have been consulting Highways England over the past few months.

We are now in a position to be able to respond more fully, given the work you have commissioned (undertaken by Systra) as well as that completed by our consultants, CH2M.

**Modelling Review**

The modelling work completed by Systra and CH2M examines the impact of a number of differing growth options on a number of junctions on the Strategic Road Network (SRN) that are likely to be impacted by the plan as follows:

- Bere Regis Roundabout;
- Roundhouse Roundabout;
- Lake Gates Roundabout (Wimborne);
- Stinsford Roundabout; and
- Max Gate.

I understand that you will publish the technical reports produced by Systra and CH2M separately so I will not go into a detailed review of the methodology employed here. Nevertheless, I can confirm that we are satisfied with the approach and inputs to both studies.

In terms of the outputs from the modelling work, both studies show that the SRN is heavily congested as a result of background traffic growth (which is forecast to be ~16% from the period 2017 – 2033).

Indeed, at most junctions the models show that these operate at or over capacity in the present day, albeit not always with high levels of associated queuing and delay. By the end of the local plan period (2033) junction operation worsens and the addition of traffic associated with the local plan makes conditions worse.

In particular, there is a significant increase in queuing on the A352 approach to the Max Gate junction, particularly in the PM peak. However, the modelling shows that the queuing is on the local road network.

Overall, the level of detriment on the strategic road network caused by the addition of local plan traffic is considered in general by Highways England not likely to be severe and as such it is unlikely that mitigation would be required to support the growth planned, especially as you have now informed us that the overall level of growth proposed will be lower than originally envisaged.

**Conclusions**

In summary, we are content that the work undertaken demonstrates that the addition of traffic related to the growth proposed in the local plan is unlikely to result in a severe impact on the SRN and therefore that mitigation to support it is unlikely to be required.

I trust that this provides sufficient clarification and comfort as the plan moves forward with regards the Strategic Road Network.

Yours sincerely,

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